5.0 PROCEDURES TO PREVENT HAZARDS
[R315-8-3 of the UAC and 40 CRF 264, Subpart C]

The ATK-Bacchus hazardous waste management facilities, HS-1, ES-1, Segment Storage and RH-1, are designed, constructed, maintained, and operated to minimize the possibility of fire, explosion, or the release of hazardous waste or hazardous waste constituents into the air, soil, or surface water that could threaten human health or the environment.

5.1 SECURITY

5.1.1 Security Procedures and Equipment

ATK-Bacchus provides 24-hour security through the use of fences, by limiting access at entrance gates, having armed private roving security patrols, and by staffing a private fire department.

5.1.2 Surveillance System

Entrance onto the site or into controlled areas is controlled either through the use of security guards under the direct supervision of the Security Department or through the use of card-operated gates equipped with digital surveillance cameras.

Access to the Bacchus site is limited to authorized personnel who have valid identification badges on their person and clearly displayed. Features of the system include:

- Visitors, accompanied by ATK-Bacchus employees, must be issued temporary badges to gain entry through access gates.
- Contractors and commercial vehicles may enter contractor gates after proper clearance has been secured.
- All gates to the site are closed and locked during non-operating hours.
- Employees, visitors, and contractors are required to show identification at all times while on the site.
- Visitors and contractors are required to obtain visitor passes, and will be either continuously escorted by an ATK-Bacchus employee or have successfully completed security/safety training before entering the plant.

5.1.3 Barriers and Means to Control Entry

A security fence surrounds the entire site with access available only through controlled gates. The location of the fence and gates are shown on Figure 5-4.

Hazardous Waste Management Facility Barriers

All of the hazardous waste management facilities are located inside the secured perimeter for the ATK-Bacchus facility. The ES-1 and RH-1 buildings are locked when unoccupied. Segment Storage is an open air pad that has no secondary fencing. The HS-1 facility is composed of a number of storage buildings that are located inside the perimeter fence for the ATK-Bacchus facility. This unit has no secondary fencing, but the doors to the liquid storage areas are locked at the end of each working day.

5.1.4 Warning Signs

Warning signs are posted at approximate 500-ft intervals, at fence corners, and at each gate along the fence. In addition each hazardous waste storage and treatment unit is posted with a sign that reads "Danger, Unauthorized Personnel Keep Out" or similar wording. The signs are written in English and are legible at a distance of at least 25 feet. The signs are posted at each entrance and at normal approach routes to the active portion of each hazardous waste management unit.

5.2 SITE FACILITY INSPECTIONS

5.2.1 General Inspection Requirements

Routine inspections are conducted at hazardous waste storage units: HS-1, ES-1, RH-1 and Segment Storage. The inspections are designed to detect equipment deterioration or malfunctions, operator errors, and accidental leaks or spills that could lead to the release of hazardous waste constituents into the environment and/or threaten human health.

The inspection forms for the hazardous waste storage units are attached. The typical non-emergency problems that may be encountered during inspections are listed on the inspection record to serve as a reminder to the inspector. The inspector is required to check the condition of each item and indicate whether its condition is acceptable or unacceptable. If the status of a particular item is unacceptable, the corrective action information is recorded.

Non-emergency item resolution will be corrected within 90 days. Corrective actions will be identified on the inspection record. The date the problem is resolved will also be documented. Problems requiring an extended period to correct may be addressed using a temporary work around solution until a permanent solution can be implemented as long as it does not lead to an emergency condition.

Emergency items involve any situation that could escalate into imminent endangerment to the environment, create hazards to personnel, or involve situations that could affect plant production activities. Typical emergencies include, but are not limited to the following: (1) spill or leak of any hazardous material, (2) incompatible storage of materials and (3) storage of unlabeled or unknown materials. All emergencies will be corrected, contained or stabilized within 72 hours from the time of discovery. All operations at a facility with an emergency will be halted until the emergency condition is resolved.

In the event that an emergency involves the release of hazardous waste or hazardous waste constituents to the environment, efforts will be directed towards continuing, removing, and decontaminating the affected area. The Hazardous Waste Contingency Plan details the processes for reporting and managing corrective action.

Environmental inspection records will be maintained for a minimum period of 3 years. Each inspection record will identify the name of the inspector, and the date and time the inspection was performed.

5.2.2 Inspection Criteria

The inspector checks the status of each item and indicates the condition of the equipment. If the condition of a particular item is unacceptable, then appropriate and complete information is recorded, including the date, the nature of the repair needed, and the corrective action. When deterioration or malfunctions of facility equipment, errors, or accidental leaks and spills are noted, the inspector takes prompt action to correct the problem. If the inspector is unable to correct the problem, supervision is immediately informed. All corrective actions or repairs are recorded on the appropriate inspection record form.

Tables identify inspection items and inspection criteria for each facility identified in this permit application.

Table 5.1
HS-1

Inspection Items	Inspection Criteria
Lights	Verify building lights are working properly & provide adequate lighting.
Telephone	Verify the telephone works properly.
Danger sign	Verify the danger sign posted on the main entrance is visible.
Building security	Verify the doors function properly (e.g. will close to maintain building temperature and keep animals out).
Fire extinguisher	Verify three (3) fire extinguishers are present in: (1) chemical transfer room, (2) Bldg. 8562 and (3) Bldg. 8568, and access is not blocked. If the extinguisher has a pressure gauge, verify it is in the normal range; if not verify the plastic seal is in place.
Emergency Equipment	Verify the following items are present and in good condition: • Absorbent material (5 bags) • Barricade tape (1 roll) • Boots- disposable (10 pair) • Drum repair kit (1 kit) • Coveralls – disposable (10 each) • Face shield (3 each) • Goggles (3 pair) • Gloves (10 pair) • Mercury spill kit (1 each) • Neutralizing media for acids (1 gallon) • Neutralizing media for bases (1 gallon) • pH paper (1 packet) • Shovel non-sparking (1 each)
Aisle space	Verify that a 30-inch minimum aisle space is provided for all containers. Small containers in cabinets are exempt from this requirement.
Chemical compatibility	Verify acid and flammables are stored in separate containments and/or cabinets. Verify oxidizers and flammables are stored in separate containments and/or cabinets

Table 5.1 continued

Inspection Items	Inspection Criteria
Container marking	Verify all containers are marked with a tracking number and or labels are clearly visible.
Containers	Visually inspect all containers in storage to ensure no containers are leaking. Visually check inside of each small container storage cabinet for signs of spills.
Sump	Visually inspect the sumps for evidence of liquids. If liquid is found identify the source, and take corrective action as necessary to eliminate the source. Collect and properly containerize any liquids collected.

Table 5.2 ES-1	
Inspection Items	Inspection Criteria
Telephone	Verify the telephone works properly.
Danger sign	Verify the danger sign posted on the main entrance is visible.
Building security	Verify the doors are secure.
Fire extinguisher	Verify that one (1) fire extinguisher is present, and access is not blocked. If the extinguisher has a pressure gauge, verify it is in the normal range; if not verify the plastic seal is in place.
Aisle space	Verify that a 24-inch minimum aisle space is provided for all 19 inch or less diameter containers, and 30-inch minimum aisle space for larger containers.
Container labeling	Verify all containers are marked with a tracking number and or labels are clearly visible
Storage compatibility	Verify 1.1 and 1.3 materials are separated by a 30-inch space minimum.
Containers	Visually inspect all containers in storage to ensure no containers are leaking.

Table 5.3 RH-1	
Inspection Items	Inspection Criteria
Telephone	Verify the telephone works properly.
Danger sign	Verify the danger sign posted on the main entrance is visible.
Building security	Verify the doors are secure.
Fire extinguisher	Verify that one (1) fire extinguisher is present, and access is not blocked. If the extinguisher has a pressure gauge, verify it is in the normal range; if not verify the plastic seal is in place.
Aisle space	Verify a 30-inch minimum for larger containers.

Table 5.3 continued

Inspection Items	Inspection Criteria
Container labeling	Verify all containers are marked with a tracking number and or labels are clearly visible
Storage compatibility	Verify 1.1 and 1.3 materials are separated by a 30-inch space minimum.
Containers	Visually inspect all containers in storage to ensure no containers are leaking.
Grounding	Verify grounding wires are in good condition. Verify that rocket motors are properly grounded.

Table 5.4 Segment Storage	
Inspection Items	Inspection Criteria
Danger sign	Verify the danger sign posted on the main entrance is visible.
Aisle space	Verify a 24-inch minimum aisle space is provided for all 19 inch or less diameter containers and 30-inch minimum for larger containers.
Container labeling	Verify all containers are marked with a tracking number and or labels are clearly visible
Storage compatibility	Segment Storage is only authorized for storage of 1.3 materials.
Containers	Visually inspect all containers in storage to ensure no containers are leaking.
Grounding	Verify grounding wires are in good condition. Verify that rocket motors are properly grounded.
Placards	Verify trailers are properly placarded.

5.2.3 Frequency of Inspection

Inspections of facilities and equipment are conducted at a frequency sufficient to identify problems before they harm human health or the environment. The schedule is based on facility usage, the age of the facility equipment, and the probability that an incident might go undetected between inspections.

HS-1, ES-1, RH-1, and Segment Storage are inspected each day using the Hazardous Waste Daily Inspection Record when in use (e.g. when loading or unloading occurs at the facility). These facilities are also inspected each week using the Weekly Hazardous Waste Inspection Record at HS-1, and the Explosive Storage Building/Pad Inspection Record at the other locations.

5.3 EMERGENCY PREPAREDNESS

5.3.1 Equipment Requirements

All hazardous waste management facilities and operations are equipped to prevent and minimize the impact of a hazardous waste releases which may be harmful to human health or to the environment. The equipment used includes internal and external communication devices, personal protective clothing and equipment, fire fighting

equipment, hand tools, and other emergency equipment and materials. The sections that follow this introduction provide additional details on the emergency equipment requirements for the hazardous waste management facilities.

5.3.2 Internal Communication

The hazardous waste management facilities are linked with the ATK-Bacchus internal telephone system. All emergencies, including hazardous waste releases or spills, are reported by dialing the plant emergency phone number (extension 22222).

The emergency notification will include the following information:

- Callers name
- Callers location (building number and telephone number)
- Type of emergency (explosion, fire, hazardous waste release, etc)
- Extent of emergency

Phones are installed at the following locations:

- HS-1 - inside the office area.
- ES-1 - explosion-proof telephone inside building.
- RH-1 - outside the building.

Internal communication between Segment Storage, and ATK-Bacchus security and safety personnel is handled by two-way radio or cell phone.

5.3.4 External Communication

The ATK-Bacchus telephone system can be used to summon emergency assistance from local law enforcement and fire departments, and state and local emergency response teams. Telephones are available at HS-1, ES-1, and RH-1 and employees responding to spills or hazardous waste releases carry two-way radios or cell phones.

ATK-Bacchus has agreements for fire fighting assistance with West Valley City and the Unified Fire Authority in the event that the ATK-Bacchus Fire Department cannot control a fire. However, due to the nature of manufacturing operations conducted at the ATK-Bacchus facility, it is understood by the outside fire departments that the ATK-Bacchus Fire Department will escort, direct, and take charge of the overall fire fighting operation. In addition, the National Fire Protection Association (NFPA) protocol dictates that the first agency on the scene coordinates all fire fighting activities.

A good mutual working arrangement is maintained between ATK-Bacchus Security personnel both the West Valley City Police Department and the Salt Lake County Sheriff's Department. In the event additional law enforcement personnel are required, other outside police departments located within the county may be contacted. Site personnel will escort outside law enforcement personnel at all times while on the site to avoid possible dangers.

ATK-Bacchus staffs a clinic with a nurse who is capable of treating minor injuries. No specific arrangements have been made with any of the area hospitals, because it has not been deemed a necessary requirement due to the nature of the hazardous waste materials managed at the ATK-Bacchus facility. Should it be needed, Pioneer Valley Hospital, located in West Valley City (approximately 9 minutes traveling time from the ATK-Bacchus facility) can provide professional medical support for employees. The

ATK-Bacchus facility also has sufficient open space for a helicopter to evacuate injured personnel.

5.3.5 Emergency Equipment

The hazardous waste container management units at the ATK-Bacchus facility are equipped with the emergency supplies listed in Tables 5.1, 5.2, 5.3 and 5.4.

All fire extinguishers are visually inspected for pressure, functionality, and existence by the ATK-Bacchus Fire Department quarterly and monthly by the building owner. Records of monthly inspections are documented on a tag attached to the extinguisher. Records of quarterly inspections are maintained by the ATK-Bacchus Fire Department. The emergency communication system for the ATK-Bacchus facility is tested weekly. The operation of remote phones and hand held radios are tested during weekly inspections.

5.3.6 Water for Fire Control

The location of fire hydrants at the hazardous waste facilities is described below. All fire hydrants are subject to an annual flow check by the ATK-Bacchus Fire Department.

Facility safety procedures limit fighting fires when explosive materials are involved. The toxic/flammable nature of materials stored at HS-1 makes fighting fires inside the facilities unlikely. The fire fighting activities at any of the hazardous waste storage or treatment facilities will involve containment only, to keep the fire from spreading to other facilities.

Water for fire control/containment is available as follows:

- HS-1- NFPA 13 water supply requires at least 772 gpm at HS-1. The nearest hydrant (800 yards away) can provide 1081 gpm at a residual pressure of 60 psi at the hydrant, but friction losses from a long hose will lower the actual flow rate. The pressure losses will be made up through the use of two pumper trucks in series should they be needed. The nature of the operations at HS-1 make fighting a fire there unlikely (for Safety reasons), but the hydrant should provide enough water to keep a fire from spreading beyond the facilities boundary.

- ES-1- NFPA 13 requires 710 gpm for fire protection. The deluge system in ES-1 provides 790 gpm @ 95 psi and a hydrant/hose can provide an additional 2430 gpm @ 20 psi.

- RH-1 and Segment Storage do not have sprinkler systems. However, fire hydrants are located in close proximity to RH-1. In case of a fire at Segment Storage, the ATK-Bacchus Fire Department will respond to the area with a 1,250 gallon engine and two-200 gallon brush units.

5.3.7 Protection of Water Supplies

Water supplies are protected by procedures and facilities utilized at the facility. Spills and leaks are prevented by container management practices, by the design of the storage facilities that include secondary containment, prevention of stormwater contamination through run-on and run-off controls, prompt cleanup of spills and frequent inspection of storage and handling areas.

5.3.8 Power Failure

Most hazardous waste operations at the site are not dependent upon power for continuing operations. In the event of a power failure, operations will stop until power is restored. The loss of heating in explosives waste storage areas could create a hazard where nitroglycerine-containing materials are stored or handled. In the event that heating is lost, the materials will be burned immediately or moved to another heated location.

HAZARDOUS STORAGE DAILY INSPECTION RECORD
(Inspection Required – Daily, When in Use)

Location (Circle)	**HS-1** **ES-1 (2105)** **ES-2 (8A)** **SEGMENT STORAGE** **RESTHOUSE #1** **BG ASH STORAGE PAD**

Date	Time	Inspector	Inspection	
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐
			Inspect containers for leaks, spills. Visually check the HS-1 sump/trench for liquids	☐

√ if OK; ☐ if action is needed

Comments:

Corrective Action:

FORM FQA-0303

WEEKLY HAZARDOUS STORAGE INSPECTION RECORD
HS-1

		Inspector Signature:									
		Time:									
		Date:									
Building Operation	Lights	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Telephone dial tone	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Security signs at entrance	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Building secure	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Emergency/Fire Equipment	HS-1 Chemical Transfer	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	HS-1 Bldg 8562	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Extinguisher #1 Extinguisher #2 Extinguisher #3	HS-1 Bldg 8586	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	In position	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Pressure gauge checked	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Seal in place	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Access available	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Emergency Equipment	Absorbent Material (5 bags)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Barricade Tape (1 roll)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Boots (10 pair)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Drum Repair kit (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Coveralls – Disposable (10 pair)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Face Shield (3)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Goggles (3 pair)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Gloves (10 pair)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Mercury Spill Kit (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Neutralizing Media – Acids (1 gal)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Neutralizing Media – Bases (1 gal)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	pH Paper (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Shovel - Non-Sparking (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Storage Conditions	Aisle space allows for unobstructed movement	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Incompatible wastes are separated	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Labels clearly visible	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Inspect containers for leaks or deterioration	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Inspect small container cabinets for leaks	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	Inspect sumps for liquid	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

✓ IF OKAY ☒ IF ACTION IS NEEDED

EXPLOSIVE STORAGE BUILDING/PAD INSPECTION RECORD
(LONG TERM STORAGE)

INSPECTOR DATE		ES-1 (2105)	ES-2 (8A)	RESTHOUSE # 1	Segment Storage	B.G. Ash Gondola
Building operation	Time of Inspection					
	Telephone dial tone				N/A	N/A
	Security signs at entrance					
	Building secure				N/A	N/A
Fire Extinguisher	In position				N/A	N/A
	Pressure gauge checked				N/A	N/A
	Seal in place				N/A	N/A
	Access available				N/A	N/A
Storage Conditions	Aisle space allows for unobstructed movement					
	Waste properly labeled					
	Incompatible wastes are separated					N/A
	Container condition			N/A	N/A	N/A
Resthouse 1 grounding	Rocket motor(s) grounded	N/A	N/A		N/A	N/A
	Grounds in good condition	N/A	N/A		N/A	N/A
B.G. Ash Gondola Items	Gondola leaks and dents	N/A	N/A	N/A	N/A	
	Lid to gondola secure	N/A	N/A	N/A	N/A	
	Accumulation date present	N/A	N/A	N/A	N/A	
	Label clearly visible	N/A	N/A	N/A	N/A	
Segment Storage Items	Rocket motor/trailer(s) grounded	N/A	N/A	N/A		N/A
	Grounds in good condition	N/A	N/A	N/A		N/A
	Shipping trailers properly placarded	N/A	N/A	N/A		N/A

√ if okay; X if action is needed

Comments/Corrective Action: